

ABSTRACT

A method is provided of enhancing the herbicidal activity of a glyphosate herbicide, comprising adding to the glyphosate herbicide a mixture of a first surfactant and a second surfactant at a weight ratio of total surfactant to glyphosate of about 1:30 to about 2:1, wherein the first surfactant has a chemical structure comprising a cationic or protonatable amino group and a C₈₋₂₄ linear or branched, saturated or unsaturated hydrocarbyl group, and the second surfactant has the formula



where R is a C₇₋₂₃ linear or branched, saturated or unsaturated hydrocarbyl group, n is 1 to 4, M is hydrogen or a cationic counterion, and R' groups are each independently hydrogen, C₁₋₄ alkyl or a group -(CH₂)_m-COOM where m is 1 to 4 and M is as defined immediately above, with the proviso that no more than one R' group is such a group -(CH₂)_m-COOM; the weight ratio of the first to the second surfactant being about 1:10 to about 10:1.

Also provided is a herbicidal composition prepared according to the above method. The first and second surfactants exhibit a synergistic interaction in enhancing herbicidal activity of the glyphosate herbicide.